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Database: US Pre-Grant Publication Full-Text Database; US Patents Full-Text Database; US OCR Full-Text Database; EPO Abstracts Database; JPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

Search: L18

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Search History

DATE: Wednesday, April 07, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L18	l16 and L17	13	L18
L17	train or locomotive	339180	L17
L16	l14 and L15	13	L16
L15	$synchronous$	358745	L15
L14	l12 and L13	13	L14
L13	communicat$	2211974	L13
L12	l10 and L11	13	L12
L11	transmi$	1757151	L11
L10	l8 and L9	14	L10
L9	digital$ near control$	42183	L9
L8	l6 and L7	14	L8
L7	authentic$ or valid$	283683	L7
L6	l4 and L5	19	L6
L5	command	506679	L5

L4	l2 and L3	19	L4
L3	client adj program$	4296	L3
L2	model adj rail$	1805	L2
L1	6676089.pn.	2	L1

END OF SEARCH HISTORY

Hit List

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Search Results - Record(s) 1 through 13 of 13 returned.

☐ 1. Document ID: US 20040011241 A1

L18: Entry 1 of 13 File: PGPB Jan 22, 2004

PGPUB-DOCUMENT-NUMBER: 20040011241
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040011241 A1

TITLE: Model train control system

PUBLICATION-DATE: January 22, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Katzer, Matthew A.	Portland	OR	US	

APPL-NO: 10/ 340522 [PALM]
DATE FILED: January 10, 2003

RELATED-US-APPL-DATA:
Application 10/340522 is a continuation-of US application 10/124878, filed April 17, 2002, US Patent No. 6530329

INT-CL: [07] B61 L 3/00

US-CL-PUBLISHED: 105/1.5; 246/167.00R, 246/197, 246/62
US-CL-CURRENT: 105/1.5; 246/167R, 246/197, 246/62

REPRESENTATIVE-FIGURES: 2

ABSTRACT:

A system which operates a digitally controlled model railroad transmitting a first command from a first client program to a resident external controlling interface through a first communications transport. A second command is transmitted from a second client program to the resident external controlling interface through a second communications transport. The first command and the second command are received by the resident external controlling interface which queues the first and second commands. The resident external controlling interface sends third and fourth commands representative of the first and second commands, respectively, to a digital command station for execution on the digitally controlled model railroad.

☐ 2. Document ID: US 20030001050 A1

L18: Entry 2 of 13 File: PGPB Jan 2, 2003

PGPUB-DOCUMENT-NUMBER: 20030001050
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030001050 A1

TITLE: Model train control system

PUBLICATION-DATE: January 2, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Katzer, Matthew A.	Portland	OR	US	

APPL-NO: 10/ 226040 [PALM]
DATE FILED: August 21, 2002

RELATED-US-APPL-DATA:
Application 10/226040 is a continuation-of US application 09/585297, filed June 1, 2000, US Patent No. 6202215
Application 10/226040 is a continuation-of US application 09/541926, filed April 3, 2000, US Patent No. 6270040

INT-CL: [07] B61 L 1/00

US-CL-PUBLISHED: 246/1.00R
US-CL-CURRENT: 246/1R

REPRESENTATIVE-FIGURES: 2

ABSTRACT:

A system which operates a digitally controlled model railroad transmitting a first command from a first client program to a resident external controlling interface through a first communications transport. A second command is transmitted from a second client program to the resident external controlling interface through a second communications transport. The first command and the second command are received by the resident external controlling interface which queues the first and second commands. The resident external controlling interface sends third and fourth commands representative of the first and second commands, respectively, to a digital command station for execution on the digitally controlled model railroad.

☐ 3. Document ID: US 20020170458 A1

L18: Entry 3 of 13 File: PGPB Nov 21, 2002

PGPUB-DOCUMENT-NUMBER: 20020170458
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020170458 A1

TITLE: Model train control system

PUBLICATION-DATE: November 21, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Katzer, Matthew A.	Portland	OR	US	

APPL-NO: 10/ 124878 [PALM]
DATE FILED: April 17, 2002

RELATED-US-APPL-DATA:
Application 10/124878 is a continuation-of US application 09/858222, filed May 15, 2001, PENDING

INT-CL: [07] B61 D 17/00

US-CL-PUBLISHED: 105/1.5
US-CL-CURRENT: 105/1.5

REPRESENTATIVE-FIGURES: 2

ABSTRACT:

A system which operates a digitally controlled model railroad transmitting a first command from a first client program to a resident external controlling interface through a first communications transport. A second command is transmitted from a second client program to the resident external controlling interface through a second communications transport. The first command and the second command are received by the resident external controlling interface which queues the first and second commands. The resident external controlling interface sends third and fourth commands representative of the first and second commands, respectively, to a digital command station for execution on the digitally controlled model railroad.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw De

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☐ 4. Document ID: US 20020113171 A1

L18: Entry 4 of 13 File: PGPB Aug 22, 2002

PGPUB-DOCUMENT-NUMBER: 20020113171
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020113171 A1

TITLE: Model train control system

PUBLICATION-DATE: August 22, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Katzer, Matthew A.	Portland	OR	US	

APPL-NO: 09/ 858297 [PALM]
DATE FILED: May 15, 2001

RELATED-US-APPL-DATA:
Application 09/858297 is a continuation-of US application 09/541926, filed April 3, 2000, PATENTED

INT-CL: [07] B61 L 25/02

US-CL-PUBLISHED: 246/124
US-CL-CURRENT: 246/124

REPRESENTATIVE-FIGURES: 1

ABSTRACT:

A system which operates a digitally controlled model railroad transmitting a first command from a first client program to a resident external controlling interface through a first communications transport. A second command is transmitted from a second client program to the resident external controlling interface through a second communications transport. The first command and the second command are received by the resident external controlling interface which queues the first and second commands. The resident external controlling interface sends third and fourth commands representative of the first and second commands, respectively, to a digital command station for execution on the digitally controlled model railroad.

☑ 5. Document ID: US 20020111723 A1

L18: Entry 5 of 13 File: PGPB Aug 15, 2002

PGPUB-DOCUMENT-NUMBER: 20020111723
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020111723 A1

TITLE: Model train control system

PUBLICATION-DATE: August 15, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Katzer, Matthew A.	Portland	OR	US	

APPL-NO: 09/ 858222 [PALM]

DATE FILED: May 15, 2001

RELATED-US-APPL-DATA:
Application 09/858222 is a continuation-of US application 09/550904, filed April 17, 2000, US Patent No. 6267061

INT-CL: [07] G06 F 17/00

US-CL-PUBLISHED: 701/19; 105/1.5
US-CL-CURRENT: 701/19; 105/1.5

REPRESENTATIVE-FIGURES: 2

ABSTRACT:

A system which operates a digitally controlled model railroad transmitting a first command from a first client program to a resident external controlling interface through a first communications transport. A second command is transmitted from a second client program to the resident external controlling interface through a second communications transport. The first command and the second command are received by the resident external controlling interface which queues the first and second commands. The resident external controlling interface sends third and fourth commands representative of the first and second commands, respectively, to a digital command station for execution on the digitally controlled model railroad.

☑ 6. Document ID: US 6702235 B2

L18: Entry 6 of 13 File: USPT Mar 9, 2004

US-PAT-NO: 6702235
DOCUMENT-IDENTIFIER: US 6702235 B2

TITLE: Model train control system

DATE-ISSUED: March 9, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Katzer; Matthew A.	Portland	OR	97229	

APPL-NO: 10/ 226040 [PALM]
DATE FILED: August 21, 2002

PARENT-CASE:
This is a continuation of U.S. application Ser. No. 09/858,297, filed May 15, 2001 now U.S. Pat. No. 6,494,408, for MODEL TRAIN CONTROL SYSTEM., which is a continuation of U.S. application Ser. No. 09/541,926, filed Apr. 3, 2000, now U.S. Pat. No. 6,270,040 for MODEL TRAIN CONTROL SYSTEM.

INT-CL: [07] G05 D 1/00

US-CL-ISSUED: 246/1R; 701/19
US-CL-CURRENT: 246/1R; 701/19

FIELD-OF-SEARCH: 246/1R, 246/3, 246/5, 246/167R, 246/187A, 340/146.2, 340/500, 340/540, 340/825, 340/825.01, 340/825.03, 340/825.06, 340/825.07, 340/825.22, 340/825.52, 340/286.01, 340/286.02, 701/19, 701/20

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
3944986	March 1976	Staples	
3976272	August 1976	Murray et al.	
4307302	December 1981	Russell	
4853883	August 1989	Nickles et al.	
5072900	December 1991	Malon	
5475818	December 1995	Molyneaux et al.	
5493642	February 1996	Dunsmuir et al.	
5681015	October 1997	Kull	
5696689	December 1997	Okumura et al.	
5787371	July 1998	Balukin et al.	
5828979	October 1998	Polivka et al.	
5896017	April 1999	Severson et al.	
5940005	August 1999	Severson et al.	
5952797	September 1999	Rossler	
6065406	May 2000	Katzer	
6494408	December 2002	Katzer	246/1R

ART-UNIT: 3617

PRIMARY-EXAMINER: Le; Mark T.

ATTY-AGENT-FIRM: Chernoff Vilhauer McClung & Stenzel, LLP

ABSTRACT:

A system which operates a digitally controlled model railroad transmitting a first command from a first client program to a resident external controlling interface through a first communications transport. A second command is transmitted from a second client program to the resident external controlling interface through a second communications transport. The first command and the second command are received by the resident external controlling interface which queues the first and second commands. The resident external controlling interface sends third and fourth commands representative of the first and second commands, respectively, to a digital command station for execution on the digitally controlled model railroad.

27 Claims, 13 Drawing figures

☑ 7. Document ID: US 6676089 B1

L18: Entry 7 of 13 File: USPT Jan 13, 2004

US-PAT-NO: 6676089
DOCUMENT-IDENTIFIER: US 6676089 B1

TITLE: Model train control system

DATE-ISSUED: January 13, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Katzer; Matthew A.	Portland	OR	97229	

APPL-NO: 09/ 311936 [PALM]
DATE FILED: May 14, 1999

PARENT-CASE:
This application is a Continuation of U.S. patent application Ser. No. 09/104,416 filed Jun. 25, 1998 now U.S. Pat. No. 6,065,406.

INT-CL: [07] G05 D 1/00

US-CL-ISSUED: 246/1R; 201/19, 340/146.2
US-CL-CURRENT: 246/1R; 201/19, 340/146.2

FIELD-OF-SEARCH: 246/1R, 246/167R, 246/3, 246/5, 246/187A, 201/19, 340/146.2, 340/500, 340/540, 340/825, 340/825.01, 340/825.03, 340/825.06, 340/825.07, 340/825.22, 340/825.52, 340/286.01, 340/286.02, 701/19, 701/20

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
4307302	December 1981	Russell	
4853883	August 1989	Nickles et al.	364/578
5475818	December 1995	Molyneaux et al.	395/200.05
5493642	February 1996	Dunsmuir et al.	
5681015	October 1997	Kull	246/187
5787371	July 1998	Balukin et al.	701/19
5896017	April 1999	Severson et al.	
5940005	August 1999	Severson et al.	
5952797	September 1999	Rossler	
6065406	May 2000	Katzer	105/1.4
6267061	July 2001	Katzer	105/1.4
6270040	August 2001	Katzer	201/19

OTHER PUBLICATIONS

Chappell, Understanding Active X and OLE, 1996, pp. 1-329, published by Microsoft Press.

ART-UNIT: 3669

PRIMARY-EXAMINER: Cuchlinski, Jr.; William A.

ASSISTANT-EXAMINER: Hernandez; Olga

ATTY-AGENT-FIRM: Chernoff Vilhauer McClung & Stenzel, LLP

ABSTRACT:

A system which operates a digitally controlled model railroad transmitting a first command from a first client program to a resident external controlling interface through a first communications transport. A second command is transmitted from a second client program to the resident external controlling interface through a second communications transport. The first command and the second command are received by the resident external controlling interface which queues the first and second commands. The resident external controlling interface sends third and fourth commands representative of the first and second commands, respectively, to a digital command station for execution on the digitally controlled model railroad.

47 Claims, 12 Drawing figures

☑ 8. Document ID: US 6530329 B2

L18: Entry 8 of 13 File: USPT Mar 11, 2003

US-PAT-NO: 6530329
DOCUMENT-IDENTIFIER: US 6530329 B2

TITLE: Model train control system

DATE-ISSUED: March 11, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Katzer; Matthew A.	Portland	OR	97229	

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Katzer; Matthew A.	Hillsboro	OR			04

APPL-NO: 10/ 124878 [PALM]
DATE FILED: April 17, 2002

PARENT-CASE:
This application is a continuation of U.S. patent application Ser. No. 09/858,222 filed on Apr. 17, 2002 U.S. Pat. No. 6,460,467.

INT-CL: [07] A63 H 19/00

US-CL-ISSUED: 105/1.5; 246/167R, 246/197, 246/62
US-CL-CURRENT: 105/1.5; 246/167R, 246/197, 246/62

FIELD-OF-SEARCH: 105/1.5, 105/1.4, 105/29.2, 246/187A, 246/167R, 246/197, 246/62, 701/20

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
3944986	March 1976	Staples	
3976272	August 1976	Murray et al.	
4307302	December 1981	Russell	
4853883	August 1989	Nickles et al.	348/121
5072900	December 1991	Malon	
5475818	December 1995	Molyneaux et al.	701/20
5493642	February 1996	Dunsmuir et al.	
5638522	June 1997	Dunsmuir et al.	
5681015	October 1997	Kull	246/167R
5696689	December 1997	Okumura et al.	
5787371	July 1998	Balukin et al.	246/187A
5828979	October 1998	Ploivka et al.	
5896017	April 1999	Severson et al.	
5940005	August 1999	Severson et al.	
5952797	September 1999	Rossler	
6065406	May 2000	Katzer	105/1.4
6267061	July 2001	Katzer	
6270040	August 2001	Katzer	

OTHER PUBLICATIONS

Chapell, David, Understanding ActiveX and OLE, 1996, Microsoft Press, Redmond.

ART-UNIT: 3661

PRIMARY-EXAMINER: Cuchlinski, Jr.; William A.

ASSISTANT-EXAMINER: Hernandez; Olga

ATTY-AGENT-FIRM: Chernoff, Vilhauer, McClung & Stenzel, LLP

ABSTRACT:

A system which operates a digitally controlled model railroad transmitting a first command from a first client program to a resident external controlling interface through a first communications transport. A second command is transmitted from a second client program to the resident external controlling interface through a second communications transport. The first command and the second command are received by the resident external controlling interface which queues the first and second commands. The resident external controlling interface sends third and fourth

commands representative of the first and second commands, respectively, to a digital command station for execution on the digitally controlled model railroad.

27 Claims, 3 Drawing figures

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

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☐ 9. Document ID: US 6494408 B2

L18: Entry 9 of 13 File: USPT Dec 17, 2002

US-PAT-NO: 6494408
DOCUMENT-IDENTIFIER: US 6494408 B2

TITLE: Model train control system

DATE-ISSUED: December 17, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Katzer; Matthew A.	Portland	OR	97229	

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Katzer; Matthew A.	Hillsboro	OR			04

APPL-NO: 09/ 858297 [PALM]
DATE FILED: May 15, 2001

PARENT-CASE:
This is a continuation of U.S. application Ser. No. 09/541,926, filed Apr. 3, 2000, now U.S. Pat. No. 6,270,040, for MODEL TRAIN CONTROL SYSTEM.

INT-CL: [07] G05 D 1/00

US-CL-ISSUED: 246/1R; 701/19
US-CL-CURRENT: 246/1R; 701/19

FIELD-OF-SEARCH: 246/1R, 246/3, 246/5, 246/167R, 246/187A, 340/146.2, 340/500, 340/540, 340/825, 340/825.01, 340/825.03, 340/825.06, 340/825.07, 340/825.22, 340/825.52, 340/286.01, 340/286.02, 701/19, 701/20

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
3944986	March 1976	Staples	
3976272	August 1976	Murray et al.	
4307302	December 1981	Russell	
4853883	August 1989	Nickles et al.	

5072900	December 1991	Malon	
5475818	December 1995	Molyneaux et al.	
5493642	February 1996	Dunsmuir et al.	
5681015	October 1997	Kull	
5696689	December 1997	Okumura et al.	
5787371	July 1998	Balukin et al.	
5828979	October 1998	Polivka et al.	
5896017	April 1999	Severson et al.	
5940005	August 1999	Severson et al.	
5952797	September 1999	Rossler	
6065406	May 2000	Katzer	
6270040	August 2001	Katzer	246/1R

OTHER PUBLICATIONS

Chapell, David. Understanding ActiveX and OLE. Redmond: Microsoft Press, 1996.

ART-UNIT: 3617

PRIMARY-EXAMINER: Le; Mark T.

ATTY-AGENT-FIRM: Chernoff Vilhauer McClung & Stenzel, LLP

ABSTRACT:

A system which operates a digitally controlled model railroad transmitting a first command from a first client program to a resident external controlling interface through a first communications transport. A second command is transmitted from a second client program to the resident external controlling interface through a second communications transport. The first command and the second command are received by the resident external controlling interface which queues the first and second commands. The resident external controlling interface sends third and fourth commands representative of the first and second commands, respectively, to a digital command station for execution on the digitally controlled model railroad.

43 Claims, 13 Drawing figures

☐ 10. Document ID: US 6460467 B2

L18: Entry 10 of 13 File: USPT Oct 8, 2002

US-PAT-NO: 6460467
DOCUMENT-IDENTIFIER: US 6460467 B2

TITLE: Model train control method

DATE-ISSUED: October 8, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY

Katzer; Matthew A. Portland OR 97229

APPL-NO: 09/ 858222 [PALM]
DATE FILED: May 15, 2001

PARENT-CASE:
This application is a continuation of application Ser. No. 09/550,904 filed Apr. 17, 2000, U.S. Pat. No. 6,267,061.

INT-CL: [07] A63 H 19/00

US-CL-ISSUED: 105/1.5; 105/1.4, 246/197
US-CL-CURRENT: 105/1.5; 105/1.4, 246/197

FIELD-OF-SEARCH: 105/1.5, 105/1.4, 105/29.2, 246/197, 246/62, 701/19, 701/20

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
3944986	March 1976	Staples	
3976272	August 1976	Murray et al.	
4307302	December 1981	Russell	
4853883	August 1989	Nickles et al.	
5072900	December 1991	Malon	
5475818	December 1995	Molyneaux et al.	
5493642	February 1996	Dunsmuir et al.	395/161
5638522	June 1997	Dunsmuir et al.	395/326
5681015	October 1997	Kull	
5696689	December 1997	Okumura et al.	
5787371	July 1998	Balukin et al.	
5828979	October 1998	Polivka et al.	
5896017	April 1999	Severson et al.	
5940005	August 1999	Severson et al.	
5952797	September 1999	Rossler	
6065406	May 2000	Katzer	
6267061	July 2001	Katzer	105/1.4

ART-UNIT: 3661

PRIMARY-EXAMINER: BeauLieu; Yonel

ASSISTANT-EXAMINER: Hernandez; Olga

ATTY-AGENT-FIRM: Russell; Kevin L. Chernoff, Vilhaure, McClung & Stenzel, LLP

ABSTRACT:

A system which operates a digitally controlled model railroad transmitting a first command from a first client program to a resident external controlling interface

through a first communications transport. A second command is transmitted from a second client program to the resident external controlling interface through a second communications transport. The first command and the second command are received by the resident external controlling interface which queues the first and second commands. The resident external controlling interface sends third and fourth commands representative of the first and second commands, respectively, to a digital command station for execution on the digitally controlled model railroad.

54 Claims, 3 Drawing figures

☐ 11. Document ID: US 6270040 B1

L18: Entry 11 of 13 File: USPT Aug 7, 2001

US-PAT-NO: 6270040
DOCUMENT-IDENTIFIER: US 6270040 B1

TITLE: Model train control system

DATE-ISSUED: August 7, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Katzer; Matthew A.	Portland	OR		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
KAM Industries	Portaland	OR			02

APPL-NO: 09/ 541926 [PALM]
DATE FILED: April 3, 2000

INT-CL: [07] G05 D 1/00

US-CL-ISSUED: 246/1R; 201/19
US-CL-CURRENT: 246/1R; 201/19

FIELD-OF-SEARCH: 246/1R, 246/3, 246/5, 246/167R, 246/187A, 340/146.2, 340/500, 340/540, 340/825, 340/825.01, 340/825.03, 340/825.06, 340/825.07, 340/825.22, 340/825.52, 340/286.01, 340/286.02, 701/19, 701/20

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
3944986	March 1976	Staples	340/172.5
3976272	August 1976	Murray et al.	246/5
4853883	August 1989	Nickles et al.	

5072900	December 1991	Malon	246/5
5475818	December 1995	Molyneaux et al.	
5681015	October 1997	Kull	
5696689	December 1997	Okumura et al.	707/19
5787371	July 1998	Balukin et al.	
5828979	October 1998	Polivka et al.	246/5
5940005	August 1999	Severson et al.	340/825.52
6065406	May 2000	Katzer	701/19

OTHER PUBLICATIONS

David Chappell, Understanding ActiveX and Ole from Strategic Technology Series, 1996.

ART-UNIT: 367

PRIMARY-EXAMINER: Le; Mark T.

ATTY-AGENT-FIRM: Chernoff, Vilhauer McClung, Stenzel, LLP

ABSTRACT:

A system which operates a digitally controlled model railroad transmitting a first command from a first client program to a resident external controlling interface through a first communications transport. A second command is transmitted from a second client program to the resident external controlling interface through a second communications transport. The first command and the second command are received by the resident external controlling interface which queues the first and second commands. The resident external controlling interface sends third and fourth commands representative of the first and second commands, respectively, to a digital command station for execution on the digitally controlled model railroad.

235 Claims, 13 Drawing figures

☐ 12. Document ID: US 6267061 B1

L18: Entry 12 of 13 File: USPT Jul 31, 2001

US-PAT-NO: 6267061
DOCUMENT-IDENTIFIER: US 6267061 B1

TITLE: Model train control system

DATE-ISSUED: July 31, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Katzer; Matthew A.	Portland	OR		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
KAM Industries	Hillsboro	OR			02

APPL-NO: 09/ 550904 [PALM]
DATE FILED: April 17, 2000

PARENT-CASE:
This Patent Application is a continuation in part of application Ser. No. 09/104,461, filed Jun. 24, 1998, now U.S. Pat. No. 6,065,406.

INT-CL: [07] A63 H 19/00

US-CL-ISSUED: 105/1.5; 105/1.4, 105/29.2, 701/19, 701/20, 246/62, 246/297
US-CL-CURRENT: 105/1.5; 105/1.4, 105/29.2, 246/297, 246/62, 701/19, 701/20

FIELD-OF-SEARCH: 105/1.5, 105/1.4, 105/29.2, 246/197, 246/62, 701/19, 701/20

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
4853883	August 1989	Nickles et al.	
5475818	December 1995	Molyneaux et al.	
5681015	October 1997	Kull	
5787371	July 1998	Balukin et al.	
6065406	May 2000	Katzer	105/1.5

OTHER PUBLICATIONS

David Chappell, Understanding Activex and Ole from Strategic Technology Series, pp. 1-329; at least, one year prior to filing date.

ART-UNIT: 361

PRIMARY-EXAMINER: Cuchlinski, Jr.; William A.

ASSISTANT-EXAMINER: Hernandez; Olga

ATTY-AGENT-FIRM: Chernoff, Vilhauer, McClung & Stenzel, LLP

ABSTRACT:

A system which operates a digitally controlled model railroad transmitting a first command from a first client program to a resident external controlling interface through a first communications transport. A second command is transmitted from a second client program to the resident external controlling interface through a second communications transport. The first command and the second command are received by the resident external controlling interface which queues the first and second commands. The resident external controlling interface sends third and fourth commands representative of the first and second commands, respectively, to a digital command station for execution on the digitally controlled model railroad.

54 Claims, 3 Drawing figures

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TITLE: Model train control system

DATE-ISSUED: May 23, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Katzer; Matthew A.	Portland	OR	97229	

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U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
4853883	August 1989	Nickles et al.	395/500.29
5475818	December 1995	Molyneaux et al.	709/208
5681015	October 1997	Kull	246/187C
5787371	July 1998	Balukin et al.	701/19

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Understanding ActiveX.TM. and OLE copyright .COPYRGT. 1996 by David Chapell, published in 1996 by Microsoft Press; 329 pages.

ART-UNIT: 361

PRIMARY-EXAMINER: Cuchlinski, Jr.; William A.

ASSISTANT-EXAMINER: Hernandez; Olga

ATTY-AGENT-FIRM: Russell; Kevin L. Chernoff Vilhauer McClung & Stenzel LLP

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